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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,415	11/26/2001	Kim Cameron	MS1-776US	1895

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EXAMINER

ALAUBAIDI, HAYTHIM J

ART UNIT PAPER NUMBER

2171

DATE MAILED: 05/10/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/995,415

Applicant(s)

CAMERON ET AL.

Examiner

Haythim J. Alaubaidi

Art Unit

2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-91 is/are pending in the application.
- 4a) Of the above claim(s) 83-91 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-33, 35-53, 55-73 and 75-82 is/are rejected.
- 7) ☒ Claim(s) 14, 34, 54 and 74 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4 and 5</u> . | 6) <input type="checkbox"/> Other: _____  |

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

A. Claims 1-82 are drawn to a data structure, hierarchies and object relationships, classified in class 707, subclass 102 and 103-R and 103-Y.

B. Claims 83-91 are drawn to query language and query processing, classified in class 707, subclass 3-5.

Inventions A - B are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention **A** has separate utility such as the hierarchy, polyarchy and the inter object relations; invention **B** has separate utility such as the query processing. Each of the two inventions does not require the particulars of the remaining inventions.

During a telephone conversation with Mr. Brian Hart on April 27, 2004 a provisional election was made without traverse to prosecute invention A, Claims 1-82. Affirmation of this election must be made by the Applicant in replying to this office action. Claims 83-91 are withdrawn from further consideration by the examiner, according to 37 CFR 1. 142(b), as being drawn to a non-elected invention.

### **DETAILED ACTION**

1. This communication is a first non-final office action in regard to Application No. 09/995,415.
2. Claims 1-91, are presented for examination, of which Claims 83-91 are withdrawn from further consideration by the examiner, as being drawn to a non-elected invention following the election of group A (Claims 1-82).
3. Claims 1-13, 15-33, 35-53, 55-73 and 75-82 are rejected under 35 U.S.C. 102(e).
4. Claims 14, 34, 54 and 74 are objected to as being dependent upon a rejected base claim.

### ***Specification***

5. The disclosure is objected to because of the following informalities: on page 2 of the instant application, Line 4, is reading "more than one hierarch" should be corrected to "more than one hierarchy". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-13, 15-33, 35-53, 55-73 and 75-82, are rejected under 35 U.S.C. 102(e) as being anticipated by Jonathan Cook (U.S. Patent Application Publication No. 2002/0169744 A1 and Cook hereinafter).

Regarding claims 1, 23, 43 and 63, Cook discloses:

dynamically generating a schema to represent multiple hierarchies of inter-object relationships (Figure 1 and corresponding text; see also paragraphs [0001], i.e. multiple hierarchical levels; [0022], [0023], [0025] and [0030])

between a plurality of objects in a data polyarchy (Figure 1 and corresponding text; see also paragraphs [0031], i.e. object-oriented database; see also [0007], [0019], [0023], [0029] through [0031])

the schema being generated based on values of attributes of the objects (paragraph [0024])

Regarding claims 2, 24, 44 and 64, Cook discloses wherein the inter-object relationships comprise a flat relationship, a hierarchical relationship (sub-category), see paragraph [0024], and multiple intersecting hierarchies of relationships (Figures 1-3 and corresponding text).

Regarding claims 3, 5, 25, 45 and 65, Cook discloses where the objects comprise enterprise resource planning (ERP) objects, directory based objects, or

database objects (any of Figures 1-3 and their corresponding text; see also paragraph [0028] and the corresponding text).

Regarding claims 4, Cook discloses identifying a plurality of attributes of interest based on values of attributes of the objects (Page 2, Table No. 1) identifying one or more dimensions of inter-object relationships within which objects that comprise at least a subset of the attributes of interest participate (this limitation was addressed in rejecting both claims 1 and 2 above).

Regarding claims 6, 21, 26, 41, 46, 61, 66 and 81, Cook discloses comprising communicating the schema to a client, the schema identifying how the client can access objects in the data polyarchy (see paragraphs [0031], [0033] and [0043]).

Regarding claims 7, 15, 17, 20, 27, 35, 37, 40, 47, 55, 57, 60, 67, 75, 77 and 80, Cook discloses receiving a request from a client based on the schema; and responsive to receiving the request: accessing an object of the objects based on the request; transforming the object into transformed data that expresses any inter-object relationship between the object and any other object of the objects based on the request; and issuing the transformed data to the client (paragraph [0051]).

Regarding claims 8, 28, 48 and 68, Cook discloses wherein the transformed data expresses the inter-object relationships with respect to other objects in a same dimension or other objects in a different dimension, the same and/or the different dimension being indicated by the request (paragraph [0050]).

Regarding claims 9, 29, 49 and 69, Cook discloses wherein the request comprises a limiting attribute to limit the transformed data by presenting the one or more objects only with respect to the limiting attribute (paragraph [0050], i.e. code edit (step 160)).

Regarding claim 10, 30, 50 and 70, Cook discloses wherein the request queries for information corresponding to an object in the data polyarchy with respect to one or more particular dimensions (paragraphs [0044] and [0054]).

Regarding claims 11, 13, 31, 33, 51, 53, 71 and 73, Cook discloses wherein the request comprises a dimension indicator to specify one or more hierarchies within which the data is to be presented in the transformed data (paragraph [0054], i.e. expansion paths)

Regarding claims 12, 16, 32, 36, 52, 56, 72 and 76, Cook discloses wherein the request further comprises a distinguishing attribute, a classifying attribute, or a locating attribute (paragraph [0040], i.e. location in the data).

Regarding claims 18, 38, 58 and 78, Cook discloses wherein the logical modifier is a Boolean modifier (paragraph [0053], i.e. Boolean operator).

Regarding claims 19, 22, 39, 42, 59, 62, 79 and 82, Cook discloses wherein the operation comprises any combination of filtering, union, intersection, join, and/or exclusion operations (paragraphs [0079 through [0050], i.e. deletion).

***Allowable Subject Matter***

8. Claims 14, 34, 54 and 74 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is the Examiner's statement of reasons for the indication of allowable subject matter:

Regarding Claims 14, 34, 54 and 74 Applicant's particular system and associated methods for a data polyarchy being represented by a plurality of hierarchies is the dimension information modifier is a siblings indication to retrieve all objects with a same parent as a current object in the data polyarchy in combination with the other limitations of the claims, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record or that encountered in searching of the prior art.



***Other Prior Art Made of Record***

10. a. Bergman et al. (U.S. Patent No. 6,564,263) discloses a multimedia content description framework;
- b. Buteau et al. (U.S. Patent No. 6,442,557) discloses an evaluation of enterprise architecture model including relational database;
- c. Ebert (U.S. Patent No. 6,434,564) discloses a browser for hierarchical structures;
- d. Ng et al. (U.S. Patent No. 6,285,366) discloses a hierarchy navigation system; and
- e. Hearst et al. (U.S. Patent No. 6,223,145) discloses an Interactive interface for specifying searches.
- f. Chita, Christain (Hierarchy Visualization).

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

***Points of Contact***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haythim J. Alaubaidi whose telephone number is (703) 305-1950. The examiner can normally be reached on Monday - Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (703) 308-1436.

Any response to this office action should be mailed to:

The Commissioner of Patents and Trademarks, Washington, D.C. 20231 or telefax at our fax number (703) 872-9306.

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, 6<sup>th</sup> Floor Receptionist, Arlington, Virginia. 22202.

***Haythim J. Alaubaidi***

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Patent Examiner  
Technology Center 2100  
May 1, 2004



SAFET METJAHIC  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100